AMENDMENTS TO THE SPECIFICATION:

Please amend the specification as follows:

Please insert the following new paragraph [0008A] on page 2, after paragraph [008]:

[008A]   Brief Description of the Drawings

Fig. 1 shows a random polymer obtained by classical radical polymerization of two monomers, and a gradient copolymer.

Fig. 2 shows a schematic representation of different polymers obtained from a styrene/methacrylic acid gradient copolymer.

Fig. 3 shows an NMR analysis of the gradient copolymer of Example 1.

Fig. 4 shows a chromatograph of the gradient copolymer of Example 1 obtained from a liquid adsorption chromatography analysis.
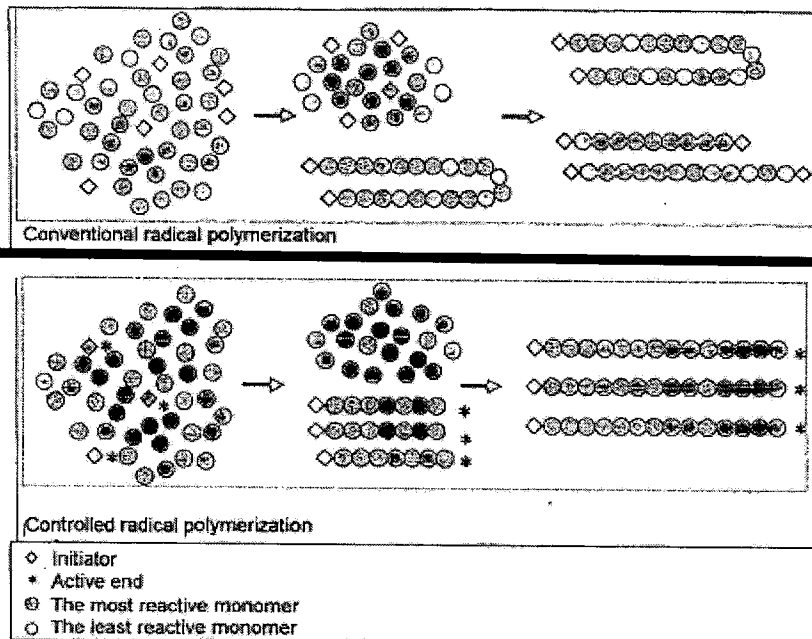
Fig. 5 shows a schematic representation of the gradient copolymer of Example 1.

Fig. 6 shows calculated gradients determined for each monomer of the gradient copolymer of Example 4.

Fig. 7 shows flow profiles of the inventive gradient polymer and comparative diblock copolymer in Example 9.

Please amend paragraph [037] as follows:

[037] As shown in <u>Fig. 1,</u> ~~the following scheme~~, for illustration purposes, a random polymer obtained by classical radical polymerization of two monomers will differ from a gradient copolymer in the distribution of the monomers, in that a random polymer is normally not identical on all the chains, nor in the length of the said chains, which is normally not identical for all the chains.

Conventional radical polymerization

Controlled radical polymerization

◇ Initiator
✳ Active end
⊕ The most reactive monomer
○ The least reactive monomer

Please amend paragraph [057] as follows:

[057] In the case of a styrene/methacrylic acid gradient copolymer, the different

polymers obtained can be represented schematically as <u>demonstrated in Fig. 2,</u> ~~follows~~,

with the white units corresponding to styrene and the dark units corresponding to

methacrylic acid<u>.</u>[[:]]

10% methacrylic acid initially:

Copolymer with a very low gradient, for which nanostructurization cannot be expected.

20% methacrylic acid initially:

Copolymer with a hydrophilic "head" and hydrophobic "tail", with a gradient that is
sufficiently pronounced to lead to nanostructurization.

50% methacrylic acid initially:

Since the monomers are isoreactive in these conditions, the copolymer obtained
is of the alternating type.

Please amend paragraph [058] as follows:

[058] The structure of ~~these~~ <u>the</u> polymers <u>shown in Fig. 2</u> may be determined by the

disappearance of the methacrylic acid as a function of the degree of conversion.

Please amend paragraph [156] as follows:

[0156] Using these methods, it was found that at 60% conversion, the final

chemical composition of the copolymer was as follows (wt%): 68.4% ethyl acrylate,

16.1% styrene and 15.5% methacrylic acid according to NMR on the calculated curve

(69%) <u>demonstrated in Fig. 3</u>.

Incorporation of the STY, MAA mixture as a function
of the conversion (Initial acrylate content: 80%)
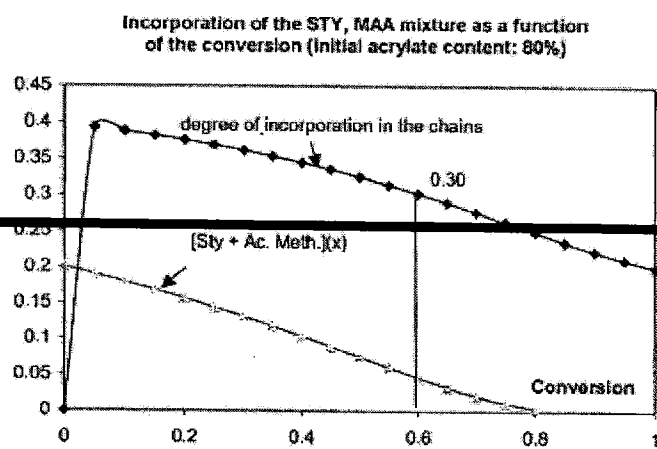
Please amend paragraph [157] as follows:

[0157] Using LAC, the trace of the polymer showed the low polydispersity of the

chemical composition of the chains, as demonstrated in Fig. 4.
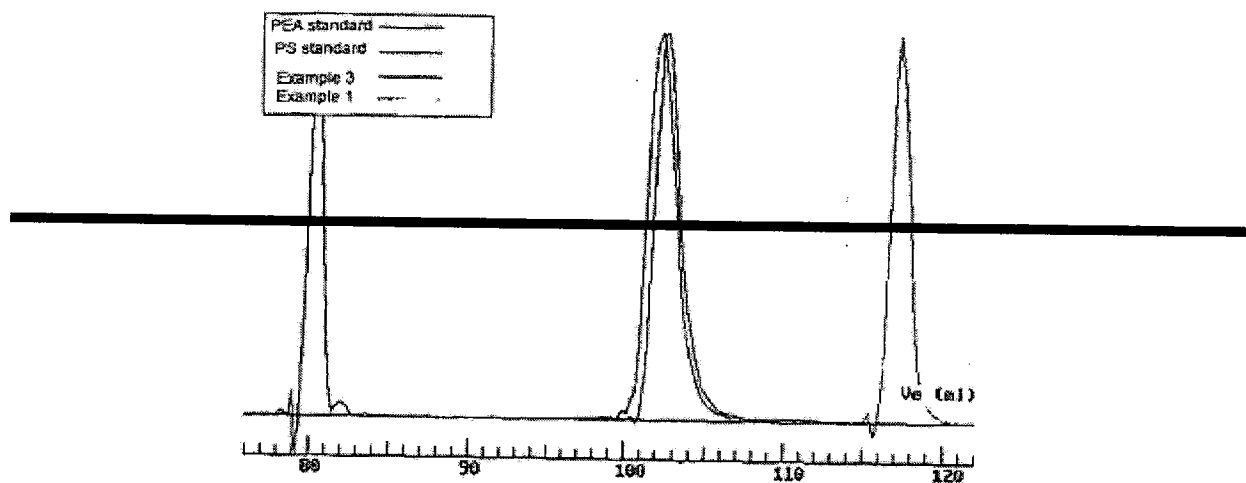
Please amend paragraph [161] as follows:

[0161] ~~The following was~~ Figure 5 demonstrates a possible schematic representation of

the copolymer that was obtained[[:]].

wherein the darkened units denote the styrene/methacrylic acid linkages, and the

white units denote the ethyl acrylate linkages.

Please amend paragraph [168] as follows:

[0168] The final composition of the copolymer was found by liquid adsorption chromatography (LAC), which showed similarity of composition with the copolymer prepared in example 1 and absence of homopolymer in the materials. This was illustrated by ~~curve 1 above~~ Fig. 4 given in example 1.

Please amend paragraph [174] as follows:

[0174] It was noted that each monomer was present throughout the reaction. The gradient determined for each monomer could then be calculated, and gave the ~~following~~ curves demonstrated in Fig. 6.[[:]]
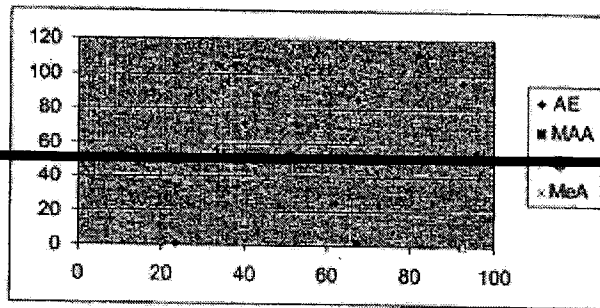
Please amend paragraph [193] as follows:

[0193] Thus, a system obtained with a gradient copolymer, even when used at high concentration, was thinner (low viscosity at rest) than that obtained with a chemically equivalent diblock, used at a far lower concentration, as demonstrated in Fig. 7.